

IN THE CLAIMS

The status of the claims pending in the present application is as follows.

1. (Currently amended): A high volume, wall-mountable air sanitation apparatus for ~~disinfecting and removing VOCs~~ contaminants such as pollutants, organisms and odors from air with high energy light and ozone, comprising:

a casing with an interior, a first side and a second side;

a means for moving air located at the first side of the casing, the air moving across at least one ~~elongated~~ target comprising a target compound, said target compound ~~comprising at least one~~ selected from the group consisting of up to 30% titanium dioxide, up to 30% copper and up to 30% silver, by weight; and

an elongated high energy UV light source adapted to direct UV light toward the air and the target, whereby the UV light striking the air and the target in the presence of water will generate at least one oxidant selected from the group consisting of hydroperoxides, super-oxide ions and hydroxyl radicals.

2. (Canceled)

3. (Original): The apparatus of claim 1, wherein the target compound further comprises a hydration compound of silica gel.

4. (Original): The apparatus of claim 1, wherein the target comprises a mesh at least partially located between the UV light source and the air.

5. (Currently amended): The apparatus of claim 1, wherein the elongated high energy UV light source emits UV light at a wavelength of approximately 185 nm to 254 nm.

6. (Currently amended): The apparatus of claim 4, wherein the target further comprises a secondary element located a predetermined distance from the ~~wire~~ mesh, whereby at least a portion of the UV light coming through ~~[[.]]~~ the mesh strikes the secondary element.
7. (Original): The apparatus of claim 6, wherein the secondary element comprises a target compound comprising approximately 0-30% titanium dioxide, 0-30% silver, and 0-30% copper, by weight.
8. (Original): The apparatus of claim 1, wherein the means for moving air comprises a fan located in the interior of the casing.
9. (Currently amended): The apparatus of claim 1, further comprising a at least one particulate filter operatively associated with the casing for removing particulates from the air before the air is moved over the target compound.
10. (Currently amended): The apparatus of claim 8, ~~whereby reflected~~ wherein UV light is may be visible from the an exterior of the casing ~~through the blades of the fan~~, whereby a person may observe ~~that~~ whether the UV ~~lights~~ light source within the apparatus ~~are~~ is operating.
11. (Currently amended): The apparatus of claim 1, wherein the UV light source comprises at least one ~~or more~~ low-pressure mercury UV ~~lights~~ light.
12. (Currently amended): The apparatus of claim 11, ~~wherein~~ comprising at least one ~~separate~~ mesh target ~~surrounds~~ disposed to surround each low-pressure mercury UV light.
13. (Currently amended): The apparatus of claim ~~11~~ 12, wherein a each of the at least one mesh target may be affected by more than one UV light source.

14. (Currently amended): An apparatus for efficiently ~~disinfecting and removing VOCs~~ contaminants such as pollutants, organisms and odors from air with high energy UV light, comprising:

a high energy UV light source capable of generating ozone from oxygen in air;

a mesh target located ~~at least partway~~ between the high energy UV light source and the air to be treated, the mesh target including a target compound ~~comprising at least one~~ selected from the group consisting of up to 30% titanium dioxide, up to 30% copper and up to 30% silver, by weight, wherein ~~whereby~~ the UV light and the target compound generate in the presence of water at least one oxidant selected from the group consisting of hydro-peroxides, super-oxide ions and hydroxyl radicals; and

a secondary target element located a predetermined distance from the mesh target, ~~the~~ secondary target element including ~~the~~ a secondary target compound selected from the group consisting of up to 30% titanium dioxide, up to 30% copper and up to 30% silver, by weight, ~~whereby~~ wherein at least a portion of the UV light that passes through the mesh target strikes the secondary target element, thereby generating an additional oxidant selected from the group consisting of hydro-peroxides, super-oxide ions and hydroxyl radicals ~~to that generated by the mesh target.~~

15. (Currently amended): The apparatus of claim 14, wherein the air generally flows ~~in the volume~~ between the mesh target and the secondary target element.

16. (Currently amended): The apparatus of claim 14, wherein the secondary target element acts as a conduit for the ~~moving~~ air.

17. (Original): The apparatus of claim 15, wherein the target compound further comprises a hydration compound of silica gel.

18. (Currently amended): The apparatus of claim 14, wherein the high energy UV light source ~~is one or more~~ comprises at least one low-pressure mercury UV ~~lights~~ light.

19. (Currently amended): A wall mountable method for treating a large volume of air, comprising:

directing the large volume of air toward a target ~~comprising a target~~, said target comprising a compound consisting of titanium dioxide, silver and copper; and

directing UV light toward the target, said ~~the~~ UV light being at a wavelength sufficient to generate ozone from oxygen in the air and being sufficient to generate at least one oxidant selected from the group consisting of hydro-peroxides, super-oxide ions and hydroxyl radicals from interaction with the compound in the presence of water.

20. (Original): The method of claim 19, wherein the target comprises a mesh located generally between the air and the UV light.

21. (Currently amended): The method of claim 20, wherein the target further comprises a secondary element located a predetermined distance from the mesh, whereby the air generally passes between the mesh and the secondary element and UV light passing through the mesh strikes the secondary ~~target~~ element in the presence of water, thereby generating an additional oxidant selected from the group consisting of hydro-peroxides, super-oxide ions and hydroxyl radicals ~~to that generated by the mesh target~~.

22. (New): A wall mountable method for treating air, comprising:

directing the air toward a target comprising a compound selected from the consisting of up to 30% titanium dioxide, up to 30% silver and up to 30% copper, by weight; and

directing UV light toward the target, said UV light being at a wavelength sufficient to generate ozone from oxygen in the air and to generate at least one oxidant selected from the group consisting of hydro-peroxides, super-oxide ions and hydroxyl radicals from interaction with the compound in the presence of water.